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NEW MILLIPEDS FROM MICHOACAN.

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The types of the seven new millipeds here described were collected by Harry Hoogstraal in the State of Michoacan, Mexico, on his "Fourth Mexican Biological Expedition," during the summer of 1941. These types are at present retained in the author's collection.

Platydesmus cerrobius, new species.

Fig. 1.

The general color above blackish, without any sharply defined lighter stripes; however, on each side of middle of each tergite a transverse lighter band in which the light area is covered with a network of black lines; keels in part paler, but some entirely dark. Head black, the 2 eyes appearing white by contrast.

The head partly exposed in dorsal view.

First tergite with anterior margin as a whole forming an obtuse reentrant angle, but the angle at middle subrectangular, the lateral portion moderately convex. See further fig. 1.

Tubercles of tergites well developed, those of anterior series extending far out on keels, the posterior series extending only on basal portion; posterior series with near 18 or 20 tubercles, these largest toward median line.

Sternites very broad.

Number of segments, usually 41 to 46.

Length, about 15 mm. with width 3 mm.

Locality—Mexico: Michoacan, Cerro Tancitaro, June 27, 1941. A number of specimens of various ages taken "on path" by H. Hoogstraal.

Characterized by form of first tergite, wide sternites and coloration, etc.

Sphaeriodesmus michoacanus, new species.

Figs. 2 and 3.

In this form the posterior margin of the 18th segment is rounded where keel joins middle region, not definitely angled as, e. g., in *angulifer*, the bend, however, being more pronounced than in *S. robustus* as shown in fig. 2.

In the character of the anterior keels near *S. oniscus* of Vera Cruz; but the fourth keel is somewhat broader antero-posteriorly and the 6th relatively more acute at the lower end. (See fig. 3.)

Surface smooth. Color light yellowish brown, with an area of darker mottling on each side of mid-dorsal region of each segment.

Length, about 11 mm.; width 4 mm.

Locality—Mexico: Michoacan, Tancitaro, Cerro San Miquel. El. 6,750 feet. July 21, 1941. One female taken by H. Hoogstraal under bark.

Peridontodesmus hoogstraali, new species.

Figs. 4–6.

This species agrees with *P. woodianus* (H. & S.) and *P. hirsutus* Pocock in having the antero-lateral tooth of the keels smaller than those following. This tooth, however, is by no means as minute as indicated for *woodianus* in the figure given by the authors of that species. This tooth and the second one are blunter than represented for *hirsutus* and the poriferous tooth is distinctly bifid, e. g., on the 13th keels, whereas Pockock's drawing shows this enlarged tooth entire. See further figs. 4 and 5.

The gonopods of the male are as shown in fig. 6.

The dorsum is dusky brown or blackish with the keels not definitely paler. Length, 9 mm.

Locality—Mexico: Michoacan, Cerro, Tancitaro, el. 7,800 ft. Two males and one female taken "on shrew carcass," June 7, 1941, by H. Hoogstraal and Traub.

Genus **TANCITARES,** new.

Resembling the rhachodesmid genus *Pararachistes*, but differing notably in the form of the male gonopods. These with coxa small and nearly in line with femur, and, instead of being short and stout, with a long flagelliform process from base of the femoral element, are relatively long and slender with a slender process or hook on caudal side of base, and on mesal side below tip with a process which typically terminates in a slender uncate distal division; femoral division with a circular, hair-lined excavation at base on mesal side. Antennae long and slender. Keels all well developed and elevated; lateral margins of keels thickened, convex and smooth, the anterior and posterior margins also upturned; pores opening laterally on the usual segments; only the more posterior keels with posterior angles produced. Sixth segment of legs nearly equal in length to the fourth and fifth taken together.

Genotype—*Tancitares michoacanus*, new species.

Tancitares michoacanus, new species.

Fig. 7.

General color above brown; caudal border of metazonites yellow over middle portion; keels of first 5 segments laterally yellow, thereafter the

poriferous keels similarly colored while the non-poriferous tend to lack the yellow. Legs light brown proximally, more yellow distally.

Tergites with a shallow transverse sulcus, entire surface between marginal thickenings of keels granular. More anterior keels seem normally to bear, from dorsal surface of marginal thickening on each side in front of middle, 2 setae, the others with 1 seta.

In the male the coxae of second legs bear each a slender process which projects caudad between coxae of third legs, each of these processes notched at apex, with mesal joint the longer; also two small, subconical processes projecting cephalad.

The gonopods of the male as shown in fig. 7.

In the female there are two cylindrical processes, densely covered with fine, short hairs, arising immediately behind the sternite of the second segment, each process with a groove along outer side; behind these processes two slender processes project from the coxae of the second legs.

Length, about 21 mm.; width, 2.8 mm.

Locality—Mexico: Michoacan, Tancitaro, Pedregal, at 6,000 feet elevation. Several females and males taken by H. Hoogstraal, June 28, 1941.

Genus **SAKOPHALLUS,** new.

A rhachodesmoid genus characterized by much reduced keels, these narrow on anterior segments and essentially absent, except for poriferous portion, on posterior segments. Pores normal. Processes from coxae of second legs of male small, subconical. Legs with fourth and fifth joints much shorter than third and sixth, these much exceeding the fourth and fifth together. The gonopods of male without coxal caleor; coxal division thick, with a basin-like excavation above in which telopodite fits; telopodite presenting an elongate lamellar division from the base of which a slender process typically distally lying against the inner curved surface of the lamellar division.

Genotype—*Sakophallus simplex*, new species.

Sakophallus simplex, new species.

Figs. 8–10.

The male holotype is yellow with legs clearer yellow, in color. In superficial form much resembling some species of Orthomorpha, but the keel of the second segment not lower than other, although it descends anteriorly.

Legs as shown in fig. 8.

The features of the gonopods are shown in figs. 9 and 10.

Length, about 9 mm.

Locality—Mexico: Michoacan, Cerro Tancitaro, elevation 7,800 feet. One male taken "on shrew carcass" June 7, 1941, by Hoogstraal and Traub.

Orthoporus mundus, new species.

Fig. 11.

Body marked with sharply defined alternating rings of black and narrower rings of yellow or yellowish white, the latter about prozonites, the black on metazonites except a narrow caudal border. Collum black except a narrow anterior and posterior border. Legs ferruginous.

Characterized best by form and sulci of the collum as shown in fig. 11.

Diameter, 6 mm.

Locality—Mexico: Apatzingan, La Majada. One female, lacking caudal end, taken by Hoogstraal August 8, 1941, under bark.

Resembling *O. leonicus* of Nuevo Leon, but a smaller form differing in color and in arrangement and direction of sulci on collum.

Paraiulus phloibius, new species.

Figs. 12 and 13.

Dark brown, sometimes nearly uniform, but occasionally with a bluish or bluish-white stripe across each segment, this often narrowing to a point down each side, but in other cases ending broadly on a lateral dark spot.

Collum in male rather long, with lower end on each side widely rounded, with middle part of curve flattened. Just above margining sulcus two sulci running forward from caudal edge but not crossing anterior border region.

Anal tergite much surpassing the valves, the process straight except the distal mucro, which is a little upcurved.

Stipes of male with free end in ectal view deeply excavated with antero-distal corner the more produced.

To be distinguished from *L. schaachti* especially in the details of the gonopods of the male as shown in figs. 12 and 13.

Number of segments in male holotype, 48.

Diameter, 2 mm., being thus considerably less than in *P. schaachti.*

Locality—Mexico: Michoacan, Cerro Tancitaro. One male and anterior end of female taken June 23, 1941, under bark of tree at elevation of 7,800 feet, and a male and several females taken at same place July 2, 1941.

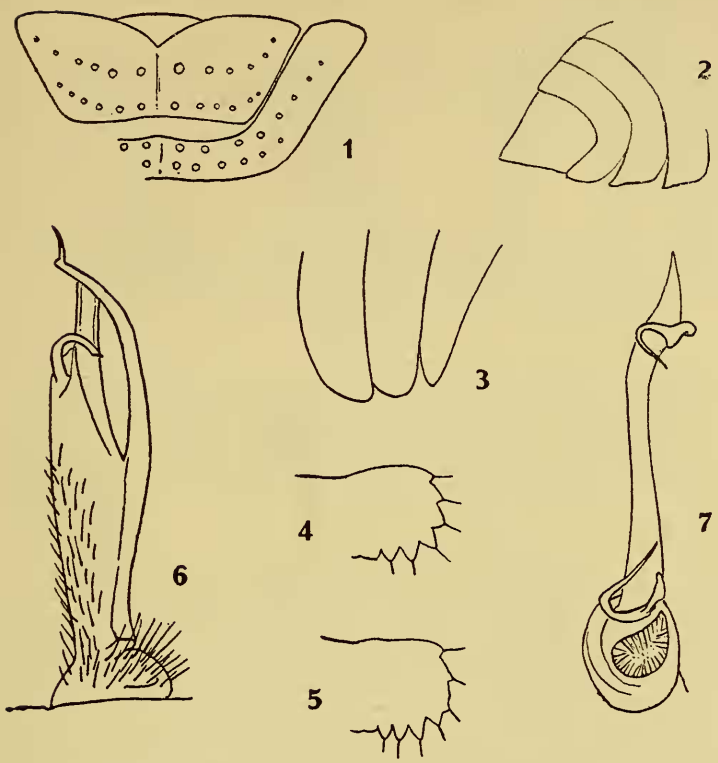

Fig. 1. *Platydesmus cerrobius*, new species. Anterior end, dorsal view.
Fig. 2. *Sphaeriodesmus michoacanus*, new species. Last four tergites, lateral view.
Fig. 3. The same. Fourth, fifth and sixth keels of left side, lateral view.
Fig. 4. *Peridontodesmus hoogstraali*, new species. Eleventh keel of right side, dorsal view.
Fig. 5. The same. Thirteenth keel of right side, dorsal view.
Fig. 6. The same. Left gonopod of male, caudal view.
Fig. 7. *Tancitares michoacanus*, new species. Telopodite of gonopod of male, mesal view.

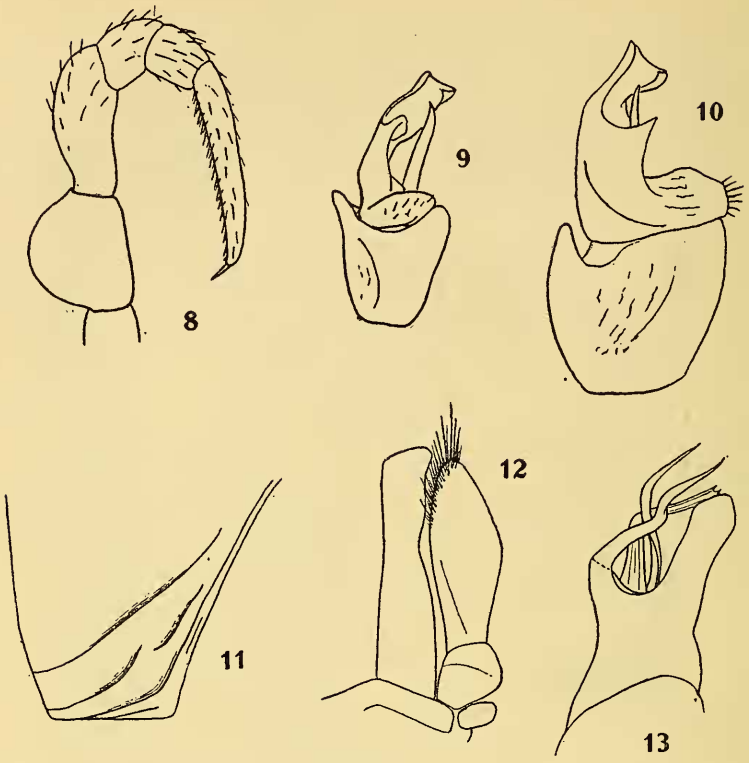

Fig. 8. *Sakophallus simplex*, new species. A leg of fifth segment.
Fig. 9. The same. Left gonopod of male, subcaudal view.
Fig. 10. The same. Left gonopod of male, subcaudal view.
Fig. 11. *Orthoporus mundus*, new species. Collum, viewed from right side.
Fig. 12. *Paraiulus phloibius*, new species. Right anterior gonopod of male, anterior view.
Fig. 13. The same. Right posterior gonopod of male, caudal view.